

CLAIMS:

What is claimed is:

1. A board-to-board electrical connector assembly for effecting a connection between two circuit boards, comprising:
 - a first connector having a low profile dielectric housing including a mating face and a mounting face for mounting the connector on a first circuit board, and a plurality of spaced mating posts projecting from the mating face of the housing;
 - a plurality of first terminals mounted on the dielectric housing and each terminal including a tail portion for connection to an appropriate circuit trace on the first circuit board and a contact portion exposed generally at said mating face;
 - a second connector having a low profile dielectric housing including a mating face for mating with the mating face of the housing of the first connector and a mounting face for mounting on a second circuit board, and a plurality of mating passages for receiving the mating posts of the first connector, the passages extending from the mating face through the mounting face of the dielectric housing of the second connector;
 - a plurality of second terminals mounted on the dielectric housing of the second connector and each second terminal including a tail portion for connection to an appropriate circuit trace on the second circuit board and a contact portion for engaging the contact portion of one of the first terminals of the first connector; andsaid mating posts of the first connector being snugly fit in the mating passages of the second connector, with the mating posts extending all the way to the mounting face of the second connector to align the connectors, to prevent wobbling of the connectors and to maintain the contact portions of the terminals in engagement.
2. The board-to-board electrical connector assembly of claim 1 wherein said mating posts of the first connector having distal ends which are generally flush with the mounting face of the second connector when the connectors are mated.
3. The board-to-board electrical connector assembly of claim 1 wherein said mating posts of the first connector have distal ends which are believed to facilitate blind mating of the connectors.

4. The board-to-board electrical connector assembly of claim 3 wherein said distal ends of the mating posts are generally flush with the mounting face of the second connector when the connectors are mated.

5. The board-to-board electrical connector assembly of claim 1 wherein the dielectric housing of said first connector is generally rectangular, and including four of said mating posts generally at four corners of the housing.

6. The board-to-board electrical connector assembly of claim 5 wherein said first connector comprises a plug connector and said second connector comprises a receptacle connector having a generally rectangular receptacle means having four of said mating passages at four corners of the receptacle means.

7. The board-to-board electrical connector assembly of claim 1 wherein at least one of said mating posts and a corresponding mating passage is of a different size from another mating post and corresponding mating passage to provide a polarization means for the connector assembly.

8. The board-to-board electrical connector assembly of claim 1 wherein the dielectric housing of at least one of said connectors includes a plurality of terminal-mounting holes in the mating face of the housing whereby the terminals are mounted to the housing through the mating face opposite the mounting face which is mounted to the respective circuit
5 board.

9. A board-to-board electrical connector assembly for effecting a connection between two circuit boards, comprising:

a plug connector having a low profile generally rectangular dielectric housing including a mating face and a mounting face for mounting the connector on a first circuit
5 board, and a plurality of mating posts projecting from the mating face of the housing generally at four corners of the housing, the mating posts having distal ends which are beveled to facilitate blind mating of the connectors;

a plurality of first terminals mounted on the dielectric housing and each terminal including a tail portion for connection to an appropriate circuit trace on the first circuit board
10 and a contact portion exposed generally at said mating face;

a receptacle connector having a low profile dielectric housing including a mating face for mating with the mating face of the housing of the plug connector and a mounting face for mounting on a second circuit board, the housing having a generally rectangular receptacle means in the mating face thereof for receiving the generally rectangular plug connector, and a
15 plurality of mating passages at four corners of the receptacle means for receiving the mating posts of the plug connector, the passages extending from the mating face through the mounting face of the dielectric housing of the receptacle connector;

a plurality of second terminals mounted on the dielectric housing of the receptacle connector and each second terminal including a tail portion for connection to an appropriate
20 circuit trace on the second circuit board and a contact portion for engaging the contact portion of one of the first terminals of the plug connector; and

said mating posts of the plug connector being snugly fit in the mating passages of the receptacle connector, with the mating posts extending all the way to the mounting face of the receptacle connector to align the connectors, to prevent wobbling of the connectors and to
25 maintain the contact portions of the terminals in engagement.

10. The board-to-board electrical connector assembly of claim 9 wherein at least one of said mating posts and a corresponding mating passage is of a different size from another mating post and corresponding mating passage to provide a polarization means for the connector assembly.

11. The board-to-board electrical connector assembly of claim 9 wherein the dielectric housing of at least one of said connectors includes a plurality of terminal-mounting holes in the mating face of the housing whereby the terminals are mounted to the housing through the mating face opposite the mounting face which is mounted to the respective circuit
5 board.

12. The board-to-board electrical connector assembly of claim 9 wherein said mating posts of the plug connector have distal ends which are generally flush with the mounting face of the receptacle connector when the connectors are mated.

13. A board-to board electrical connector assembly for effecting a connection between two circuit boards, comprising:

a first connector having a dielectric housing for mounting on a first circuit board;
a plurality of first terminals mounted on the dielectric housing and each terminal
5 including a tail portion for connection to an appropriate circuit trace on the first circuit board
and a contact portion;
a second connector having a dielectric housing for mounting on a second circuit board
and including a mating face for mating with the first connector and a mounting face for
mounting on the second circuit board, the housing including a plurality of terminal-receiving
10 passages in the mating face;
a plurality of second terminals mounted on the dielectric housing of the second
connector and each second terminal including a tail portion for connection to an appropriate
circuit trace on the second circuit board and a generally U-shaped contact portion for
receiving therewithin the contact portion of one of said first terminals, each second terminal
15 including a mounting portion for insertion into one of the terminal-receiving passages in the
mating face of the second connector; and
whereby the second terminals are top loaded into the dielectric housing of the second
connector to hold the second connector on the second circuit board.